ISSN No:-2456-2165

# Breast Sarcoidosis: An Extremely Rare Case of Idiopathic Granulomatous Mastitis

Ayoub Amghar, Alexia Mabengui, Sara Tossi, Boufetal Houssine, SakherMahdaoui, Naima Samouh

**Abstract:- The breast involvement of sarcoidosis is an extremely rare condition, it is a poorly understood pathology that includes an inflammatory mastitis that resembles an advanced breast cancer with skin inflammation which poses diagnostic and therapeutic difficulties to clinicians.**

***Key words:-*** *Idiopathic granulomatous mastitis, caseous granuloma, benign mastopathy, sarcoisodis , diagnosis, treatment.*

## I. INTRODUCTION

Mammary sarcoidosis is a rare pathology of young women that falls within the framework of idiopathic granulomatous mastitis (MGI). MGI is a rare disease, first described in 1972 by Kessler and Wolloch [1].

The clinical and mammographic appearance of MGI lesions in the breast will point to a malignant origin.

The confirmatory positive diagnosis is histological: anatomopathologically, the evolution of breast sarcoidosis is benign.

Our article will focus on one case, while elucidating the clinical, paraclinical (radiological, biological and histological) data.

## II. CASE REPORT

Our patient is a 43-year-old married woman with 2 live children delivered vaginally, having breastfed for 2 years, the patient presented to the consultations for an autopalpation of a left breast nodule evolving for 3 months with a recent inflammation complicating the clinical picture.

The initial clinical examination revealed a 4 cm mass located in the inferoexternal quadrant of the left breast, fistulized to the skin and emitting serosities. The general examination revealed a nodular erythema of both lower limbs.

- **Paraclinical examinations:**

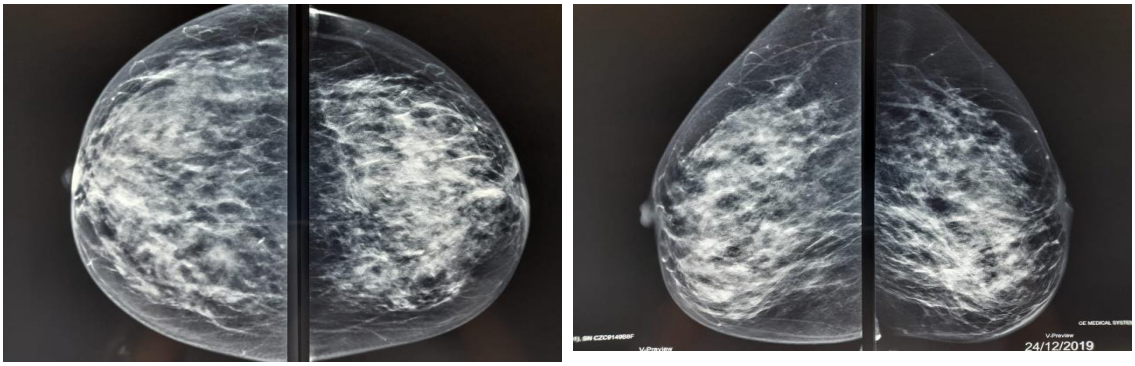



Fig. 1: Mammography

Mammography showed an increase in density in the left breast without any architectural rupture or clearly circumscribed nodular formation that could be individualized without any suspicious micro-calcification.

The complementary ultrasound examination performed after the examination did not reveal a clearly circumscribed mass but a hyper echogenic infiltration of the QIE of the left breast with the presence of left axillary nodes of centimetric size with a lipomatous center.

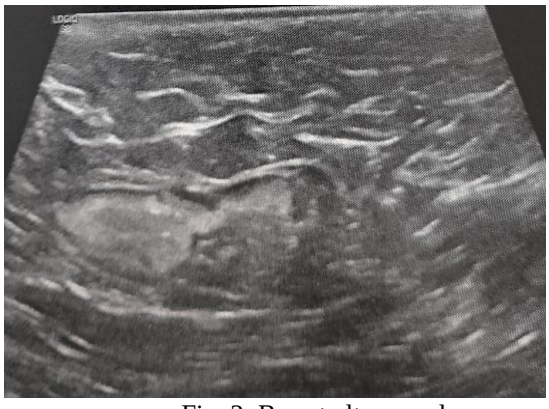


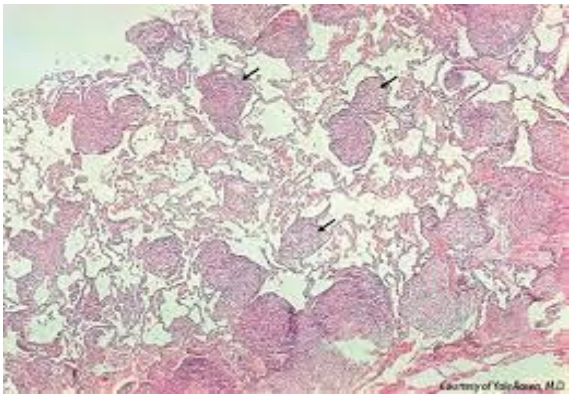
Fig. 2: Breast ultrasound

ISSN No:-2456-2165

The patient underwent a biopsy with the trucut and the histological examination showed a polymorphic inflammatory granuloma made of lymphocytes, plasma cells, neutrophils and eosinophils without any sign of malignancy.

Fig. 3: Anatomopathological aspect of the granuloma

Our course of action was to perform a lumpectomy at the site of the lesion in the QIE of the left breast with



histological examination: chronic inflammatory mastitis lesion in acute flare with suppuration and sclerocysticmastosis lesions associating ductal ectasia of the adenosis without in situ or invasive breast neoplasia, An anatomopathological re-reading of the same specimen in another laboratory showed lesions of chronic inflammatory granulomatous mastitis suppurated on non-proliferating sclerocysticmastosis without signs of in situ or invasive breast neoplasia without signs of specificity with breast tissue largely dissociated by a polymorphic inflammatory infiltrate made of lymphocytes, plasma cells, neutrophilic and eosinophilic polynuclear cells, and with numerous giant cell granulomas: aspect in favour of a breast sarcoidosis.

The patient underwent a thoracic CT scan in search of pulmonary or mediastinal involvement of sarcoidosis with at the mediastinal level: no adenopathy or pleural or pericardial abnormality, at the parenchymal level: no nodular or cystic parenchymal lesion.

Biological workup: the patient underwent a biological workup that targeted several probable etiologies with the following results:

Hematological: CBC with Hb 14.5 WBC count: Leukocytes at 6700/ mm3 of which neutrophils 47% Eosinophils 2.1% Basophils 0.3% Lymphocytes 37.3% Monocytes 12.8% (increased) the platelet count was 236,000/ mm3 the Sedimentation Rate (SR) was normal at 3 mm in the first hour and 14 mm in the second hour, The urea level was normal at 0.29 g/l and the creatinine level was normal at 8.7 mg/l. The transaminase level was normal as well as the calcemia and calciuria levels.

On the immune serological level: the rate of antibodies against the cytoplasm of the PNN (ANCA) was negative with absence of fulorescence, the threshold of the ACE (angiotensin converting enzyme) was normal at 18 UECA.

The anti-cytoplasmic neutrophil antibody measurement was 160 positive with a significant level above 20.

Antibodies to SS-B; SSA; RNP; Sm; Ro 52; scl-70; sm; dsDNA; PCNA; Ribosomal P-Proteine PM-scl./100; Nucleosomes; Histones; Mitochondria were all negative

Anti-Jo-1; DFS 70 and Centromere B antibodies were positive.

Protein electrophoresis was: 62.7% Albumin Alfa 1: 1.7% Alfa 2: 8.9% Beta 10.8%, Gamma 15.9%.

Bacteriological: Quantiferon TB Gold Plus was negative

Parasitological examination of stools was negative with negative coproculture

Rotavirus and adenovirus testing was negative.

## III. DISCUSSION

Sarcoidosis is a mysterious systemic granulomatosis. To date, the polygenic character with the intervention of genes involved in cellular immunity is accepted, but no etiological factor has been identified. In the absence of biological markers, the disease is defined by its histological aspect. Thus, the anatomic-clinical confrontation takes all its meaning here, as the clinical and histological differential diagnoses are numerous. Cutaneous sarcoidosis is indeed the "great simulatrix" of today, characterized by its lesion polymorphism.

Diagnostic strategy is based on 3 elements: clinical, radiological and biological. The demonstration of tuberculoid granulomatous histological lesions without caseous necrosis is an important argument, but other granulomatous diseases, tuberculous or not, must be eliminated.

A systemic granulomatous disease of still unknown etiology, sarcoidosis is characterized by the formation of epithelioid and gigantocellular granulomas without caseous necrosis [2] resulting from an exaggerated immune response underpinned by a genetic predisposition. All organs can be affected, and in 80-90% of cases the involvement is lymph node, intrathoracic and pulmonary. Cutaneous involvement is less frequent but, depending on the series and the authors, it occurs in 25 to 35% of cases [3]. When systemic involvement exists, there is no correlation between the extent of cutaneous lesions and the severity of the disease. Two scores for assessing the activity and severity of skin involvement are now available and will allow the effect of the many available treatments to be evaluated objectively [4].

Extrathoracic and lymph node involvement in sarcoidosis remains rare, especially in the digestive and mammary systems. The diagnosis is only confirmed by biopsy. Digestive forms should be investigated for multisystem involvement (5).

## REFERENCES

[1.] Kessler E, Wolloch Y. Granulomatous mastitis. A lesion clinically simulating carcinoma. Am J Clin Pathol. 1972; 58: 6426.
[2.] VIGNON-PENNAM MD. Sarcoidosis. Ann Dermatol Venereol, 2004;131:89-91. 02.
[3.] HAIMOVIC A, SANCHEZ M, JUDSON MA, et al. Sarcoidosis: a comprehensive review and update for the dermatologist. J Am Acad Dermatol, 2012;66:699.e1-18.
[4.] ROSENBACH M, YEUNG H, CHY EY, et al. Reliability and convergent validity of the cutaneous sarcoidosis activity and morphology instrument for assessing cutaneous sarcoidosis. JAMA Dermatol, 2013;149:550-556.
[5.] G.Chalhoub1F.MalvilleDeceptive forms of sarcoidosis The Journal of Internal Medicine Volume 36, Supplement2, December 2015, Pages A173-A174.